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May 30th.

Vice President BRIDGES in the chair.

The Committees on Dr. Le Conte's papers, read 9th and 16th inst., on Mr. Charles Girard's papers, read 16th and 23d inst., severally reported in favor of their publication in the Proceedings.

Synopsis of the Cucuicides of the United States.

By JOHN L. LE CONTE, M. D.

CATAGENUS Westwood.

1. *C. rufus* Westw. Zool. Journ. 5, 221. *Cucujus rufus* Fabr. Ent. Syst. emend. suppl. 123; Syst. El. 2, 93. Oliv. 74 bis, tab. 1, fig. 3.

Middle, Southern and Western States. This species varies in size from .18 to .55 of an inch. The posterior angles of the thorax are usually prominent, on account of the sinuosity of the sides near the base; sometimes this sinuosity is very faint, then the posterior angles, although rectangular, are not prominent. Newman's *C. puncticollis* (Ann. Nat. Hist. 2, 398) is described as having but 6 striæ on each elytron, (the 5th and 6th striæ are said to be indistinct.) Now, in some specimens, which cannot be separated from *C. rufus*, the fifth and sixth striæ are not well marked, but in all that I have seen the seventh stria is quite obvious. As the elytra are declivous at the sides beyond the seventh stria, I think it probable that this seventh stria is constant in the genus, in which case there is no reason why Newman's species should not be united with *C. rufus*.

CUCUIUS Fabr.

1. *C. clavipes* Fabr. Gen. Ins. Mantiss. 233, (1790); Ent. Syst. emend. 1, 2, 94. Olivier, Enc. Méth. 6, 242, (1791); Ins. 74 bis, tab. 1, fig. 1.

Middle and Western States, not rare; found principally under the bark of *Liriodendron*, but not confined to that tree. This species is omitted in Fabricius' *Systema Eleutheratorum*.

2. *C. puniceus* Mann. Bull. Mosc. 1843, 303. Er. Ins. Deutschl. 309. Sitka; I have not seen this species. By an oversight, Mr. White, in the British Museum Catalogue, quotes Motschulsky for the name.

By another oversight in the same Catalogue, *C. sanguinolentus* and *hæmatodes*, European species, are mentioned as found in North America, while our common species, *C. clavipes*, is said to inhabit South America. Reference to these errors is perhaps needless, as attention has already been called to them by Schaum, (Bericht, &c. 1851, p. 55,) but they are merely mentioned in this place for the information of those to whom Schaum's Report is not accessible.

PEDIACUS Shuckard.

1. *P. planus*, depressus, fuscus, opacus, dense punctatus tenuiter pubescens, fronte bifoveata, thorace latitudine vix brevior, antrorsum paulo angustato, lateribus subrepandis pone medium oblique emarginatis, angulis posticis prominulis, elytris punctulatis lateribus declivibus, stria suturali profunda. Long. .12—.14.

Silvanus planus Le Conte, Agassiz' Lake Superior, 223.

Lake Superior, rare. The fourth, sixth and eighth joints of the antennæ are a little smaller than the third, fifth and seventh; the last three joints are twice as wide as the eighth. The anterior angles of the thorax are rounded. One specimen is paler colored and almost rufous.

2. *P. subglaber*, depressus, testaceus, nitidus, vix subtilissime pubescens, capite thoraceque punctatis, fronte excavata, thorace latitudine paulo brevior, lateribus subquadridentatis (denticulo postico ante basin posito) disco late hi-impreso, elytris obsoletius punctatis lateribus elevatis, margine sulcato, stria suturali distincta. Long. .14.

One specimen, North Carolina, Mr. Zimmermann. The antennæ are a little

shorter than in *P. planus*, and the inequality of the joints from the fourth to the eighth is not as obvious. In some lights the elytra have the appearance of being faintly striate. The impressions of the thorax consist of two longitudinal ones concave outwards, which are connected near the base and apex by transverse impressions.

3. *P. subcarinatus* Mann. Bull. Mosc. 1852, 363. Russian America; (unknown to me.)

LÆMOPHLEUS Er.

A. Frons antice trisinuata.

1. *L. biguttatus*, latiusculus depressus, supra piceus, parum nitidus subtiliter pubescens, capite thoraceque confertim punctatis, elytris confertim punctatis striis utrinque 4 profundis, suturali antice minus distincta, macula utrinque ante medium testacea ornatis; thorace utrinque linea profunda insculpto, lateribus late rotundatis subrepandis. Long. .1—15.

Le Conte, Agassiz' Lake Superior, 223, (1850.)

White, Brit. Mus. Cat. (1851) p. 5.

Cucuius biguttatus Say, Journ. Acad. Nat. Sc. 5, 267.

Læmophilæus bisignatus Guérin, Icon. Règne An. 205.

A common species found in the Middle and Southern States, and as far west as Nebraska. The under surface is frequently rufous, but is sometimes as dark as the upper surface. As this species is more densely punctured than the next, and agrees in this respect with the European *L. monilis* (*Cuc. bipustulatus* Panz.) with which Say compares it, I have concluded that this is really Say's species; the typical specimens in the Melsheimer collection render this view certain.

The head of the male is as wide as the thorax, and the antennæ two-thirds as long as the body.

2. *L. fasciatus*, latiusculus depressus, rufus nitidus glaber, capite thoraceque modice punctatis, hoc lateribus rotundato vix repando, utrinque linea profunda insculpto, elytris nigris, striis utrinque 4 profundis, suturali antice indistincta, interstitiis parce subseriatim punctulatis, macula utrinque ante medium testacea ornatis. Long. .1—18.

Melsheimer, Proc. Acad. Nat. Sc. 2, 113.

Middle and Southern States to Texas; the head of the male is very large.

3. *L. adustus*, læte rufus, paulo convexus, latiusculus, nitidus glaber, capite thoraceque punctatis, illo canaliculato, hoc lateribus rotundatis postice sinuatis, angulis posticis prominulis, linea tenui utrinque insculpto, elytris nigris, basi triangulariter læte rufis, tenuiter multistriatis, striis punctatis, interstitiis vix parce punctulatis, apice rufescente. Long. .1.

A unique male specimen of this beautiful species, found in York Co., Pennsylvania, was kindly given me by Dr. Melsheimer under the name here adopted. Body above and beneath bright rufous, shining, glabrous. Head as wide as the thorax, slightly convex, finely, moderately densely punctured; vertex finely channelled; before the eyes is a fine transverse arched line; the outline of the front is concave each side and emarginate in the middle, which is not so much produced as in the two preceding; the labrum is short; mandibles long and slender, emarginate at tip. Antennæ moderately stout, nearly as long as the body. Thorax twice as wide as long, considerably narrowed at the base, sides strongly rounded, sinuate near the posterior angles, which are sharp and prominent; disc moderately convex, finely punctured, with the lateral line not strongly impressed. Elytra not wider than the thorax, moderately convex, with 7 or 8 very fine striae, on which are placed moderately large punctures; the interstitial spaces are marked with a few very fine punctures, which on the sutural space form a somewhat regular series; their color is black, with a large, common, triangular, rufous spot at the base, which along the suture extends one-third the length; the apical margin is slightly reddish. The scutellum is transverse, without any distinct apical angle.

B. Frons medio producta, vel late emarginata vel truncata; scutellum triangulare.

4. *L. bullatus*, elongatus, depressus testaceus, nitidus glaber, thorace latitudine non brevior, lateribus rectis, postice subangustato, parce punctato, linea utrinque profunda exarato, dorso bulla magna lævi paulo convexa impressione minus profunda definita ornato, elytris obsolete striato-punctulatis. Long. .07.

One female found at the junction of the Colorado and Gila Rivers, California. The large, slightly elevated, dorsal convexity of the thorax will readily distinguish this species. The head seems to be nearly smooth, and the anterior transverse line is distinct; the antennæ are a little more than half as long as the body, and their joints are rounded.

5. *L. nitens*, elongatus, depressus, testaceus, nitidus, glaber, thorace quadrato, lateribus fere rectis, obsoletissime parce punctulato, linea utrinque profunda exarato, elytris subtilissime seriatim punctulatis, stria suturali postice tenuiter impressa. Long. .08—09.

Abundant at the Colorado River, California. The head is finely and sparsely punctulate, the vertex is slightly channelled, and the anterior transverse line is deep; in the male the head is as wide as the thorax, and the antennæ are as long as the body, with the first joint equal to the two following united.

6. *L. Zimmermanni*, elongatus, depressus, testaceus nitidus glaber, capite thoraceque parce punctulatis, hoc latitudine fere longiore, lateribus rectis, angulis anticis prominulis, linea utrinque profunda exarato, elytris subtiliter striato-punctulatis, sulco laterali valde profundo. Long. .07—09.

Pennsylvania and Maryland, Mr. Zimmermann; Illinois, Mr. Willcox. This very small species is readily distinguished from the next by the finer punctuation and the absence of the outer marginal line of the thorax.

7. *L. punctatus*, elongatus, depressus, testaceus nitidus, glaber, capite thoraceque sat dense punctatis, hoc latitudine paulo brevior, postice subangustato lateribus fere rectis, lineis utrinque lateralibus duabus, elytris tenuiter 4 striatis et seriatim punctulatis, sulco laterali profundo. Long. .07.

S. Carolina, Mr. Zimmermann. The small punctures of the elytra appear to be near the striæ, but not upon them, and form two series between the striæ. The antennæ of the male are as long as the body, and the first joint is as long as the head, or about equal to the three following united. The outer marginal line of the thorax is not distinct.

9. *L. geminatus*, elongatus, depressus, rufo-testaceus, nitidus, glaber, capite thoraceque densius punctatis, hoc latitudine non longiore, lateribus rectis, postice non angustato, utrinque bisstriato, elytris tenuiter striatis, stria punctulatis, sulco marginali profundo. Long. .06.

Louisiana and Georgia, Dr. Schaum. The outer stria of the thorax is distinct, but does not reach the base. The antennæ of the female are two thirds as long, those of the male almost as long as the body; the first joint is equal to the two following united in the female, and is a little longer in the male. This species is very closely related to the last, but seems, by the difference in the form of the thorax and by the differences in the antennæ and elytra, to be properly separated.

10. *L. modestus*, elongatus, depressus, testaceus nitidus, glaber, capite thoraceque parcius punctatis, hoc quadrato, lateribus antice rotundatis, postice subangustato, linea laterali profunda utrinque notato, elytris stria minus impressis distincte punctatis. Long. .08.

Cucujus modestus Say, Journ. Acad. Nat. Sc. 5, 268.

Laemophilæus singularis White, Brit. Mus. Cat. 7, (1851.)

Georgia and South Carolina. The antennæ of the male are a little longer than the body, and the elytra are shorter than in the female. The first joint of the antennæ in both sexes is as long as the two following united.

11. *L. puberulus*, elongatus, depressus, testaceus, nitidus sat dense subtiliter pubescens, thorace quadrato, latitudine subbrevior lateribus fere rectis,

postice subangustato, subtiliter punctulato, linea utrinque laterali distincta, disco late impressa, elytris tenuiter striatis, vix punctulatis. Long. .05—.07.

Colorado River, California, abundant. The head is very finely punctulate, and is distinctly channelled posteriorly; the discoidal impression of the thorax is very faint, but it causes the anterior margin, in particular lights, to appear slightly elevated. The male only differs from the female by the broader head and longer and thinner antennæ; in both sexes, the first joint of the latter, although thicker, is but little longer than the second.

C. Frons vix producta, medio emarginata; labrum breve, transversum.

12. *L. cephalotes*, elongatus depressus, niger nitidus glaber, capite thorace maiore quadrato, sat punctato, mandibulis (maris) elongatis, thorace quadrato, postice subangustato, subtiliter parce punctulato, lateribus rectis, linea laterali tenui, elytris obsolete striato-punctulatis, testaceis, basi apice margine suturaque nigris. Long. .10.

A very singular species, of which I found but a single male at the Colorado River, in California. The head is quadrate, with parallel sides, and without impressions; the usual marginal line is distinct. The mandibles project beyond the labrum, and are about half as long as the head, the tip is emarginate. The labrum is broad and slightly emarginate; the antennæ are more than half as long as the body; the first joint is not much larger than the second, but the last three joints are distinctly larger than the preceding and subtriangular. The scutellum is triangular. The under surface of the body is black, with the antennæ and feet piceous.

Species unknown to me.

13. *L. longicornis* Mann. Bull. Mosc. 1843, 303. Russian America.

DENDROPHAGUS Schönh.

1. *D. glaber* Lec. Agassiz? Lake Sup. 223. Lake Superior and Lake Huron, rare. From the punctures of the elytra proceed small hairs, which, however, are invisible, except with a very powerful lens.

2. *D. Cygnæi* Mann. Bull. Mosc. 1846, 15. Sitka; (unknown to me.)

BRONTES Fabr.

1. *B. dubius* Fabr. Syst. El. 2, 97. *Cucuius dubius* Fabr. Ent. Syst. emend. 2, 95. Oliv. Enc. Méth. 6, 242. Abundant in every part of the United States east of the Rocky Mountains. The mandibles of the male are armed with a very slender curved horn, which converges upwards to meet the one of the opposite side. The upper surface of the body is sometimes entirely black; sometimes the head, thorax and margin of the elytra are brown.

2. *B. debilis*, ater, depressus opacus, dense punctatus, thorace latitudine vix brevior, lateribus denticulatis, angulis anticis paulo productis, elytris subtilius punctato-substriatis, lateribus magis declivibus, antennis piceis, pedibus testaceis. Long. .17—.2.

Georgia, not rare. Differs from the preceding by the thorax being not distinctly transverse, less strongly toothed at the sides, with the anterior angles acute, but very slightly produced; by the stria of the elytra being less punctured, and by the sides being almost perpendicular. The sexual characters are as in the preceding.

3. *B. truncatus* Motschulsky, Bull. Mosc. 1845, 1, 92. Mann. Bull. Mosc. 1852, 364.

California (San Jose,) and Russian America (according to Motschulsky.) This species has the thorax formed almost as in the preceding, the anterior angles being a little more produced; the elytra are, however, deeply striate, with the interstices more rough with elevated punctures; they are also more strongly carinate towards the side. The sexual characters as in the preceding species, but in addition, the elytra of the male are longer, and obliquely slightly sinuated at the apex.

TELEPHANUS Er.

1. *T. v e l o x*. *Heterodromia velox* Hald. Proc. Acad. Nat. Sc. 3, 127. *Psam-machus (velox)* Hald. Proc. Acad. Nat. Sc. 3, 348. *Telephanus atricapillus*† Er. Ins. Deutschl. 329.

Middle, Southern and Western States, under stones and pieces of wood. This species is named in Dr. Harris' collection, "*Orsodacna? pallida* Say," which name is quoted by Schaum (Bericht, &c., 1851) as having priority, but I have not been able to find any description of the insect among Say's publications.

SILVANUS Latr.

A. Thorax lateribus sexdentatis.

1. *S. d e n t a t u s* Say, Journ. Acad. Nat. Sc. 5, 265. Mann. Bull. Mosc. 1852, 303. *Lyctus dentatus* Fabr. Ent. Syst. emend. 1, 2, 503; Syst. El. 2, 561.

Found, but not abundantly, throughout the United States, usually in rice, sugar and other articles of commerce. According to Fabricius, it is found in South America, and according to Mannerheim in Russian America.

2. *S. s u r i n a m e n s i s* Steph. Ill. Brit. Ent. Mandibulata, 3, 114.

For the synonyms of this common insect, see Erichson's Ins. Deutschl. 336. It is now diffused over the whole globe in articles of commerce. Erichson adopts, from Fabricius, the specific name *frumentarius* for it, but the oldest description is certainly that of Linnæus. Of the descriptions by the older authors, the chronological succession is as follows:

Dermestes surinamensis Linn. Syst. Nat. (ed. 12mo reform. 1767) 2, 565.

Tenebrio surinamensis De Geer Mém Ins. (1775) 5, 54, tab. 13, fig. 12.

Colydium frumentarium Fabr. Ent. Syst. 62, (1775) id. emend. 1, 2, 496.

Dermestes sezdentatus Fabr. Ent. Syst. emend. (1792) 1, 232.

B. Thorax lateribus haud dentatus.

a. Caput pone oculos denticulo armatum.

3. *S. b i d e n t a t u s*, linearis, depressus, opacus ferrugineus, subpubescens, thorace confertim punctulato, elongato, postice angustato, angulis anticis spinosis, lateribus crenulatis, dorso obsolete bisulcato, elytris punctato-striatis; capite pone oculos denticulato. Long. .12.

Erichson, Ins. Deutschl. 338.

Dermestes bidentatus Fabr. Syst. El. 1, 317.

Colydium sulcatum Fabr. Syst. El. 2, 555, (teste Erichson.)

A European species, which occurs in the Middle and Southern States. The sides of the thorax are very slightly sinuous.

4. *S. p l a n a t u s*, linearis valde depressus, opacus, ferrugineus, subpubescens, thorace confertim punctato, elongato, pone medium sinuatim angustato, angulis anticis subspinosis, lateribus obsolete crenulatis, elytris confertim punctato-striatis; capite pone oculos denticulato. Long. .12.

Germar, Ins. Nov. 466.

Silvanus Zimmermanni Guérin, Icon. Règne An. 198.

Southern States and Nebraska. The outline of the thorax is slightly concave before the middle, with the sides nearly parallel; behind the middle they converge, so that at the middle they form a very obsolete angle; the anterior angles are hardly prominent, and the posterior ones are obtuse, but not rounded.

5. *S. c o g n a t u s*, linearis valde depressus, subnitidus ferrugineus, subpubescens, thorace confertim punctato, obsoletius in disco, elongato, ab apice sensim angustato, lateribus crenulatis fere rectis, angulis anticis acutis parum productis, elytris punctato-striatis; capite pone oculos denticulato. Long. .10.

Southern States; closely resembles the preceding, but the sides of the thorax are straight, and the anterior angles, though short, are more acute; the posterior angles are obtuse.

b. Caput pone oculos haud denticulatum.

6. *S. i m b e l l i s*, linearis, depressus, fere opacus, ferrugineus subpubescens,

thorace confertim subtilius punctato, linea dorsali obsoleta lævi, elongato, ab apice angustato, lateribus parum rotundatis, angulis anticis acutis, non productis, elytris confertim punctato-striatis. Long. .11.

Georgia. This species has the elongate form and brown color of those of the preceding division, but is easily distinguished by the absence of the little tooth behind the eye. The posterior angles of the thorax are obtuse.

7. *S. nitidulus*, linearis, valde depressus, testaceus, nitidus subpubescens, thorace parcius subtiliter punctulato, latitudine longiore, pone medium angustato, angulis anticis acutis, haud productis, elytris subtilius seriatim punctatis. Long. .08.

Colorado River, California, under poplar bark. The sides of the thorax are almost parallel anteriorly, and subangulated at the middle; the anterior angles are scarcely prominent, and the posterior ones are obtuse. The disc is marked with two faint longitudinal impressions connected at the base. The elytra are not wider than the head, and the rows of punctures become obsolete towards the tip. The head is as broad as the thorax, flattened and finely but not densely punctulate.

8. *S. opaculus*, linearis, depressus, rufo-testaceus, opacus, pubescens, thorace latitudine non longiore, quadrato, angulis omnibus prominulis, lateribus crenulatis fere rectis, confertissime punctato, dorso obsolete bisulcato, elytris subtiliter dense punctato-striatis. Long. .07.

Colorado River, California, under bark. From the next species it differs by its more elongate and depressed body, and the coarser punctuation of the head and thorax.

9. *S. rectus*, elongatus, subdepressus, testaceus, opacus, subpubescens, thorace latitudine subbreuiore, quadrato, angulis omnibus rectis, lateribus rectis subcrenatis, confertim punctulato, elytris punctato-striatis. Long. .07.

One specimen from Illinois, Mr. Willcox. The punctures of the head and thorax are very fine; the striæ of the elytra are more distant than in any of the preceding species. The specimen is not in very good condition, but I think that there can be no doubt of the propriety of referring it to this genus.

10. *S. quadricollis*, linearis, subdepressus, rufo-testaceus, nitidulus, subpubescens, thorace sat dense punctulato, linea dorsali sublævi, latitudine sublongiore, lateribus parallelis subsinuatis, angulis anticis rectis, posticis subobtusis, basi rotundata, elytris thorace non latioribus punctulatis, punctisque vix maiori bus seriatim impressis. Long. .11.

Guérin, Icon. Règne An. 198.

Georgia. My specimens are not in good condition, but present all the characters of this genus, except that in the only antenna now remaining the 10th and 11th joints appear closely united.

11. *S. advena*, elongatus, rufo-testaceus, subnitidus pubescens, thorace punctulato, transversim quadrato, lateribus paulo rotundatis, angulis anticis dilatatis, posticis rectis, basi sinuata, elytris subtiliter punctato-striatis; antennarum articulo 9no sequente minore. Long. .06—.07.

Erichson, Ins. Deutsch. 339. Redtenbacher, Käfer Oesterr, 778.

Cryptophagus advena Waltl, Silberm. Rev. Ent. 2, 256.

Latridius muscorum Ziegler, Proc. Acad. Nat. Sc. 2, 270.

Abundant throughout the United States, in articles of commerce, herbaria, &c. This species, although placed by several entomologists in the present genus, has so much the form of *Paramecosoma*, that any person would be tempted to refer it to that genus. The first joint of the abdomen is not longer than the second, and therefore, according to Erichson's definition, it would be excluded from the family of *Cryptophagides*.

In this essay must be included the description of a remarkable insect, of which my unique specimen is in such a bad condition, that I am unable to determine whether it should be referred to any described genus, or even to indicate its position in the group; from its specific characters, I suspect a relation with *Pedi-*

acus, but the size of the eyes and the form of the thorax are very different. I retain for it the name which appears in Dejean's Catalogue.

Nemicelus marginipennis, linearis, valde elongatus et depressus, pallide testaceus nitidus, capite cum oculis magnis thorace latiore, hoc latitudine fere duplo longiore, lateribus antice rotundatis, postice subsinuatis, pone medium angustato, disco punctulato, fovea utrinque prope basin profunda impresso, elytris punctulatis vix striatis, margine laterali nigricante, apice truncatis. Long. .20.

Georgia. The antennæ are longer than the head and thorax, with turbinate joints, gradually increasing in size; the first joint is thickened, and is longer than the two following united. The last joint of the maxillary palpi is larger than the penultimate and apparently acute at tip. The angles of the thorax are all rounded; the posterior foveæ are oblong, slightly oblique, and about as far from the sides as from the base.

Notice of some Coleopterous Insects, from the Collections of the Mexican Boundary Commission.

BY JOHN L. LE CONTE, M. D.

This paper includes descriptions of some new species contained in collections received from the Boundary Commission immediately before the completion of the survey, and with the collections previously made by the active and enterprising naturalists attached to the expedition, will enable a moderately full Coleopterous Fauna of the lower Rio Grande to be prepared.

Of the species noted below, some were collected between Laredo and Ringgold barracks, by Messrs. Schott and Weise, under the command of Major Emory. Those from Frontera, Rio Grande, were collected by Mr. J. D. Clark, under Major Graham: a few others were obtained by Mr. Clark at San Antonio, in Texas. Some very interesting species from Fort Union, New Mexico, collected by Major Sibley, are also added, although not belonging properly to the Boundary fauna: and one from Dr. Cooper's collection in Oregon, which was omitted in my description of his species.

Cicindela punctulata and *albohirta*. Frontera; Mr. Clark.

Cicindela 16-punctata Klug. Jahrb. 32. Frontera; Mr. Clark. This species resembles very closely *C. Hentzii*, nor does there appear in Klug's description any character which would separate it from that species. The law of representative forms is abundantly exemplified in the species of this genus, and much careful investigation will be necessary to determine what are well defined limits of the species.

C. blanda? A species closely resembling this was also found by Mr. Clark at Frontera.

Pasimachus costifer, niger, nitidus; thoracis elytrisque marginibus cyaneiscentibus, illo postice angustato, lateribus postice sinuatis angulis posticis rectis, his modice convexis, lævibus, carina humerali postice obsolete continuata, costaque submarginali acuta utrinque paulo abbreviata ornatis: antennarum articulis 2 et 3 compressis. Long 1.05—1.2.

Dr. Weise, Laredo to Ringgold Barracks. This species has the same form as *P. depressus* and *punctulatus*, but the sharply elevated costa between the margin and the obsoletely prolonged humeral carina will readily distinguish it, The mandibles are slightly rugous.

Harpalus impiger, niger, nitidus, elongatus, thorace latitudine paulo breviori, paulo convexo, postice angustato, lateribus rotundatis, anguste marginatis, basi subemarginata punctulata, utrinque subimpressa, angulis posticis obtusis non rotundatis, elytris thorace vix latioribus, profunde striatis, unipunctatis, apice sinuatis, antennis palpis pedibusque ferrugineis. Long. .52—.65.

Santa Fe, New Mexico, Mr. Fendler: Frontera, Mr. Clark. This species is comparatively almost as elongated as *H. erraticus*, but the thorax is more

narrowed posteriorly, the lateral margin is narrower, and the elytra of the female are not toothed near the apex: the posterior angles of the thorax are slightly prominent, and almost rectangular.

Phileurus cribr osus, ater, nitidus, convexus, clypeo marginato apice acute elevato, ante oculos transversim carinato, thorace transverso, parcius punctato, pone medium canaliculato, elytris punctis grossis seriatim positis. Long. .52.

Laredo to Ringgold Barracks; Mr. Weise. This curious little species seems to have most affinity with those of Burmeister's division (*§ (2)*);* the anterior tibiæ have three large external teeth, the mandibles are without any prominent external tooth, and the elytra without any short series of punctures near the scutellum. It differs, however, from all those described by Burmeister in having in place of the two usual frontal tubercles a transverse ridge, scarcely emarginate at the middle. The prosternal prominence is small, acute and densely pilose.

At Vallecitas, in California, I found the elytra and thorax of a species which seems on comparison very similar to the specimen found by Mr. Weise, but belongs to a section of the genus having a short stria at the base of the elytra, between the first and second stria: the punctures of the elytra are more closely set, so as to form striae; the thorax is more densely punctured anteriorly, and almost smooth posteriorly: the dorsal channel extends almost to the apex, but is not deep, and finally the anterior tibiæ above the three long teeth have an indistinct prominence representing a fourth tooth. The length was about .65 of an inch. The species may be called *P. illatus*.

Athyreus serratus, ferrugineus, nitidus, clypeo antice truncato elevato, vertice transversim elevato, thorace lateribus rotundatis serrulatis, antice valde declivi, et medio late impresso, carinis utrinque duabus obliquis munito, apice valde marginato, elytris tenuiter striato-punctatis, antennis flavis. Long. .54.

One specimen, Laredo to Ringgold Barracks. The head is finely scabrous; the clypeus is truncate and perpendicular at the apex, which forms a subtriangular facet; each side above the eye commences an elevated line, which runs forward to the angle of the lateral emargination of the clypeus, then in a curve runs to the apex, where it unites with the elevated edge of the triangular facet above mentioned: the vertical horn is very short and transverse. The thorax is sparsely punctulate, with a few large punctures along the middle, and in the concavities: each side at the middle is a broad transverse sulcus, limited anteriorly by an elevated line; anterior to this the disc is very declivous, with the anterior margin strongly elevated; at the middle of this declivous face is a shallow impression, and again each side a deeper excavation, between which and the first mentioned elevated line is a strong somewhat oblique elevated ridge: the sides are regularly rounded and serrate, the anterior angles are acute. The striae of the elytra are fine and moderately punctured; the interstices are very sparsely punctulate. The under surface and the legs are furnished with long yellow hairs.

Although this is the first authentic appearance of the genus *Athyreus* in our fauna, I find on comparison that *Bolbocerus fossatus* Hald. (*Proc. Acad.* 6, 362,) and *Scarabæus ferrugineus* Beauv. (*Ins.* 90, tab. 2b, fig. 3,) also belong here; the middle coxæ in both of those species are separated, and the mesosternum is somewhat elevated, acutely margined at the sides and declivous anteriorly. In his beautiful monograph of *Athyreus*, Klug suggests that the species of Beauvois just mentioned belongs to this genus, although in the absence of specimens for examination, this opinion could not be confirmed.

Anomala luteipennis, ovata nigra virescens, nitida, supra glabra, thorace lateribus rotundato, sat dense punctato, capite densius rugoso, postice punctato, elytris luteis, striis punctatis sutura epipleurisq. anguste nigricantibus, pygidio parcius sat grosse punctato antennis testaceis. Long. .47—52.

Laredo to Ringgold Barracks, Mr. Schott. One specimen has a small black

* *Lamellicornia*, 3, 151.

spot on each elytron on the first smooth interstice about the middle: the mesosternum is not prominent: the club of the antennæ in all the specimens is as long as the remaining portion. A nearly allied species from Wisconsin, given me by Mr. Guex, may be thus described.

A. marginella, ovata nigra virescens, nitida supra glabra, capite densius rugoso, postice punctato, thorace lateribus subangulato, punctato, elytris pallide testaceis, striis punctatis, sutura, margine, lineola humerali, guttaque utrinque dorsali ad medium nigris, pygidio confertim subtiliter rugoso, opaco, antennis testaceis, (lamella ♂ longiore). Long. .4—45.

Helichus aequalis, fuscus, æqualiter pubescens, subtiliter punctatus, thorace latitudine longiore, lateribus vix rotundatis, fere parallelis: elytris vix obsolete striatis. Long. .18.

One specimen, Frontera (Rio Grande), Mr. Clark. This species differs from *H. lithophilus*, by the thorax being longer, and scarcely narrowed anteriorly, and by the fine punctures of thorax and elytra being very distinct: the striæ of the latter can hardly be traced. Its characters approach most closely to *H. Gilensis* Lec. (Pro. Acad. 6, 43), a species of a broader form, and with very distinct lines of punctures upon the elytra.

Cymatodera halleta, testacea, parce pilosa, capite thoraceque dense punctatis fusco-piceis, hoc latitudine fere duplo longiore, subcylindrico, postice subangustato antice transversim impresso, lateribus subsinuatis, elytris punctis quadratis magnis seriatis postice minoribus, interstitiis parce punctatis; gutta utrinque ad quadrantem, fascia lata pone medium, alteraque angustissima subapicali nigro-piceis, antennis capite thoraceque vix longioribus fusco-testaceis. Long. .41.

One specimen, Laredo to Ringgold Barracks, Mr. Schott. The general form and appearance is that of *C. undulata*, but the thorax is not constricted posteriorly and is less sinuate on the sides, and the punctures of the elytra are much larger.

Cymatodera cancellata, fusco-picea, parce pubescens, capite thoraceque dense punctulatis, hoc latitudine sesqui longiore, pone medium subito fere duplo angustiore, ante medium transversim impresso, lateribus antice parallelis, postice sinuatis, elytris punctis magnis quadratis seriatis postice vix minoribus, interstitiis angustis parce punctulatis, antennis capite thoraceque paulo longioribus, extrorsum paulo incrassatis, articulis turbinatis, ultimo longiore cylindrico. Long. .38.

One specimen found with the preceding. Remarkable for the strange form of the antennæ, and for the sudden narrowing of the thorax behind the middle: there is however, no posterior transverse impression, except the constriction in the sides: the middle of the base is slightly elevated and marked with an oblong fovea. It is closely related to *C. brunnea* Mels., but is smaller, with the thorax much more narrowed behind.

Elaphidion tæniatum, fusco-piceum, tenuiter fusco-pubescens, thorace latitudine vix brevior, lateribus rotundato, dense punctato, callis dorsalibus minus distinctis, punctoque laterali albo notato, elytris thorace paulo latioribus, antice grossius punctatis macula parva basali, alteraque transversa irregulari ad medium albo-pubescentibus, apice truncato, breviter bispinoso: antennis (♀) corpore brevioribus, articulis 3—6 apice breviter unispinosus. Long. .95.

One specimen, Mr. Schott. In form resembles *E. atomarium*, but is not quite so robust: the thorax is scabrous with large punctures, the dorsal callosities are, as usual, three in number, one medial elongated, the others each side in front of the middle. The head around and between the eyes is densely pubescent with whitish hair: the elytra are moderately shining, the punctures are not very dense and become very small towards the apex. The thighs are not armed.

Elaphidion tenue, nigro-piceum, valde elongatum, lineare, æqualiter longius cinereo pilosum, thorace subcylindrico, latitudine fere sesqui longiore, lateribus parum rotundato, sat dense punctato, callo elongato dorsali notato, elytris punc-

tatis, punctis postice subtilioribus, apice emarginatis at vix armatis, antennarum articulo 3io spina longissima armato. Long. .56—.65.

Laredo to Ringgold Barracks, Mr. Schott. Remarkable for its very slender form, in which it almost equals *E. unicolor*, (*Stenoc. unicolor* Randall): the fourth joint of the antennæ is armed with a very minute spine: the following joints are unarmed, as are the femora: the spine of the third joint extends two-thirds the length of the fourth joint. The elytra are truncate at tip, but the truncate part is slightly emarginate, in such manner that the angles become a little prominent. The antennæ of the male are longer, those of the female shorter than the body.

Oncideres pustulatus, niger, pube brevi fusca dense vestitus, thorace brevissimo, spina laterali acuta armato, lineaque transversa subundulata denudata ornato, elytris guttis sparsis denudatis nitidis, versus humeros tuberculiformibus ornatis. Long. .75.

Laredo, Mr. Schott. The anterior spots of the elytra are elevated, those behind the middle are flat.

Aedilis spectabilis, niger, subtiliter dense cinereo-fuscoque pubescens, thorace fusco maculis albis confluentibus utrinque ornatis, elytris basi fasciisque tribus undulatis obliquis fuscis (intermedia latiore), pedibus fusco annulatis, antennis longissimis cinereis, articulis 1—5 apice fuscis, 5to fasciculo apicali interno recurvato ornato. Long. .91.

Fort Union, Major Sibley. The first five joints of the antennæ are densely clothed beneath with fine short erect hair: the apex of the fourth joint is hardly thickened, but at the apex of the fifth joint is an internal brush of long yellowish hairs, which are recurved, so as to form a hooked prominence. The form of the thorax in this species is quite different from *A. nodosus*, and is more similar to *Monohammus*, the spine being perpendicular, and the disc more cylindrical: it ought probably to form a new genus, but as the arrangement of the genera of Longicorns is still very unsatisfactory, it is needless for the present to separate species that are obviously allied.

ULOCHÆTES Lec. (Cerambyci Lepturidæ.)

Caput deflexum, fronte quadrata, perpendiculari, pone oculos subito, at parum constrictum: oculi emarginati; antennæ inter oculos pone medium insertæ; palpi breves articulis turbinatis subæqualibus; antennæ corpore duplo breviores, articulis 3 et 4 coniunctis 4to æqualibus: thorax transversus lateribus et dorso acute tuberculatus, densissime pilosus; elytra abbreviata, scabra, apice subacute rotundata, humeris valde elevatis. Tarsi posteriores articulo 1mo sequentibus coniunctis æquali. Alæ abdomine longiores, rectæ.

1. *U. leoninus*, niger, capite griseo-pubescente, thorace antrorsum angustato densissime longe griseo-piloso, antice valde transversim impresso, postice paulo constricto, elytris opacis apice late testaceis, tibiis testaceis, apice nigris; antennis basi obscure testaceis, alis fuliginosis. Long. .96; lat. .35.

Prairie Paso, Oregon, Dr. Cooper. This very fine insect seems allied to *Necydalis*; it differs, however, by its less constricted neck, and by the proportions of the joints of the antennæ, also by its stouter form: the elytra diverge more posteriorly, showing a tendency towards a subulate form. The scutellum is smooth and shining, with the sides hairy: the pectus is thinly clothed with grayish hairs.

Mallodon serrulatus, piceo-niger, nitidus capite antice parcius, pone oculos densius punctato, genis subacutis, thorace transverso, lateribus scabro et inæquali disco subtilius parce punctato, antrorsum subangustato, lateribus rectis serrulatis, versus angulos posticos paulo reflexis, elytris disperse subtilius punctatis. Long. 2.3.

Laredo to Ringgold Barracks, Mr. Weise. Resembles closely *M. cilipes* Hald., but the sides of the thorax are less serrate, and less reflexed: the disc is also less convex, the mandibles are not elongated, but thick, and emarginate at the end; those of the male of *M. cilipes* are similar in form.

Buprestis sphenicus, nigro-æneus, elongatus convexus breuissime parce pubescens, capite thoraceque punctis inauratis, hoc latitudine sesqui brevior, antice paulo angustato lateribus late rotundatis, basi media late rotundata utrinque sinuata, angulis posticis acutis, elytris a basi angustatis postice subacutis et serrulatis, subtiliter striato-punctatis, interstitiis parce punctatis, basi flavo pilosis, abdomine lateribus maculis triangularibus flavo-pilosis ornato. Long. .75—1.0.

Laredo to Ringgold Barracks. Mr. Schott. The arrangement of Buprestidæ is at present in such confusion, that I am unable, by the books, to determine the proper reference of this species. Generic characters of much importance in this family have been lost sight of in the arrangements proposed, and a thorough revision is necessary. This particular species has for generic characters: clypeus broadly but regularly emarginate; the antennæ inserted under a strongly elevated line which runs obliquely towards the emargination of the clypeus; the labrum emarginate; the mentum rounded anteriorly; the scutellum small, transverse and rounded; coxal plates much but gradually dilated internally; mesosternum divided, with the portions entirely connate with the metasternum; palpi almost cylindrical, with subequal joints: anus very slightly emarginate: tarsi with the joints 1—4 broadly lobed, the lobe of the fourth joint rounded: the basal joint of the posterior tarsi very little longer than the second: the mandibles are thick, short and obtuse.

Buprestis ambienis, læte viridis, ænescens, elongatus minus convexus, capite valde rugoso et punctato, oculis mediocribus, thorace latitudine brevior punctato lateribus rotundatis, flavo-marginatis, basi fere recte truncata, fovea ad medium alteraque utrinque ad angulos notata, elytris basi coniunctim subemarginatis, humeris acutis, lateribus flavo-marginatis, parallelis a dodrante angustatis, apice truncatis, sat profunde striato-punctatis, interstitiis paulo convexis, parce punctulatis. Long. .68.

Frontera (Rio Grande), Mr. Clarke. Although having very much the form of *Anthaxia*, this species differs considerably in its generic characters; the antennæ palpi and feet are unfortunately wanting, but the following marks will enable the genus to be recognized:

The antennæ are near the eyes, (which are moderate in size) and are inserted on the front: behind the insertion is a deep fovea, at the bottom of which is a round shining tubercle* (as in *Dicerca*); the clypeus is very broadly emarginate in the arc of a circle, (labrum wanting); the mandibles are short, thick and obliquely truncate; the mentum is broad and rounded anteriorly; the mesosternum firmly connate with the metasternum; the posterior coxal plates with the posterior outline concave so as to form an internal tooth; anus not emarginate; scutellum very small, subtriangular.

The yellow margin of the thorax is posteriorly separated from the disc by an impressed line: the yellow of the elytra is slightly dilated behind the humerus and again about the middle.

Phænops mirandus, niger, ænescens subtiliter dense punctulatus, capite guttis 5 politis, circulo positis, thorace guttis 4 anticis (intermediis maioribus) alteraque utrinque pone medium, lineaque dorsali postica nitidis lævigatis; elytris margine basique tenuiter rubris, lineisque flavis decussatis ornatis. Long. .65.

Fort Union, New Mexico, Major Sibley. This beautiful species is nearly of the same form as our common black *P. longipes*, but is less acute posteriorly: the yellow lines of the elytra are arranged so as to include the following spots: a large common triangular one at the scutellum, separated from the base by the red margin; an elongated lateral spot extending from behind the humerus to two-fifths the length: a large common rhomboidal spot on the suture, extending from the second to the fourth fifth of the length: immediately opposite the external angle of the rhomboid, a small submarginal black dot; finally a large apical blotch; separated from the rhomboid by a narrow yellow line, and from the margin by the red marginal line above mentioned. The yellow stripes which bound the anterior faces of the rhomboid are considerably broader than the

* Is this an ocellus, or a tympanum?

others. The under surface is of a uniform black bronze color, and densely punctured.

Eusattus puberulus, inflatus niger, subopacus, parce breviter flavo-pubes-cens, elytris parcius punctatis, lineisque elevatis duabus obsoletis notatis; thoracis angulis posticis acutis modice productis, tibiis anticis extus usque ad medium serrulatis, apice valde productis. Long. .34.

Laredo to Ringgold Barracks, Mr. Weise. The sides of the thorax are strongly margined, and furnished with long hairs: the base and apex are ciliate as usual with short bristles: the disc is entirely without punctures: the slightly elevated lines of the elytra in one specimen can hardly be observed.

Asbolus ? infaustus, parum convexus, niger, subnitidus, capite parce punctato, thorace latitudine sesqui brevior, lateribus rotundatis, postice breviter sinuatis, angulis anticis acutis, posticis rectis, basi truncata, parce in disco obsolete punctato, elytris ovalibus thorace paulo latioribus, postice valde declivibus, disco punctis, lateribus apiceque tuberculis subelevatis subseriatis notatis. Long. .83.

One specimen, Laredo to Ringgold Barracks, Mr. Weise. This species agrees in its characters very closely with the two California species described in the Annals of the Lyceum of New York, (5, 129) the mentum is however more flattened, slightly carinate at base, and impressed anteriorly; the antennæ are less slender, and the joints are more distant, and the last joint is not truncate, but oval and pointed, and but little smaller than the tenth joint. A close affinity to *Centrioptera* is also seen, but that genus has less produced prosternum, and the mentum is not emarginate.

Allecula socia, picea fusco-pubescent, thorace latitudine duplo brevior, parce punctato, antrorsum angustato, lateribus rotundato, angulis posticis fere rectis, elytris profunde striato-punctatis, interstitiis subconvexis, punctatis. Long. .45.

Laredo to Ringgold Barracks, Mr. Schott. Closely related to *A. punctulata* Mels., but with a broader thorax: as in that species the eyes are large and moderately distant, the third joint of the antennæ equal to the fourth, and the penultimate joint of all the tarsi lobed.

Meloe sublaevis, cyaneo-niger, fere opacus, capite thoraceque parce subtiliter punctulatis, hoc quadrato, postice subangustato, angulis omnibus rotundatis, disco subdepresso, foveis duabus ante medium impresso, elytris subtiliter dædaleo-rugosis, antennis sensim paulo incrassatis. Long. .65.

Fort Union, New Mexico, Major Sibley. Probably a female: the antennæ are not filiform as in *M. angusticollis* Say, nor thicker in the middle as in *M. impressus* Kirby, but are very gradually thickened to the end: the third joint is not longer than the fourth, and is about twice the size of the second. The inner spur of the posterior tibiæ is acute, the outer one is larger, concave and obtuse. This species approaches the Western American *M. strigosus* Mann., but the thorax is not so much elongated, the sides are nearly straight, and the base less emarginate.

Lytta costata, valde elongata, nigra, dense cinereo-pubescent, capite linea nigra impressa, thorace latitudine sesqui longiore, antrorsum angustato, lateribus late rotundato, linea nigra dorsali impressa, elytris sutura margine, costisque 4 elevatis ornatis, externa antice paulo abbreviatis, tarsis antennisque nigris. Long. .65.

One specimen, Frontera, (Rio Grande) Mr. Clark. The antennæ are slender and filiform: the first joint is equal in length to the third; the second is about one half as long; from the third the joints diminish gradually in length: the inner spur of the posterior tibiæ is acute, the outer one is broader, obtuse and concave. The labrum is slightly emarginate. It belongs in division (B—g.) of Proc. Acad. 6, 331.

Lytta luteicornis, nigra dense cinereo-pubescent, thorace latitudine longiore lateribus antice rotundatis, disco lineolis duabus nigris sæpius ornato,

lateribus fere parallelis, elytris thorace fere duplo latoribus; tibiis apice tarsisque nigris, palpis, labro, clypeo, antennisque luteo-testaceis, his extrorsum obscuris. Long. .85—.95.

Laredo to Ringgold Barracks, Mr. Weise. In the male, the first joint of the antennæ is as long as the head, compressed, and angulated externally beyond the middle but very slightly curved: the second joint is one half larger than the third. In the female the first joint extends to the posterior margin of the eye, and the second joint is about equal to the third. This species is allied to *L. longicollis* Lec. but the color of the cephalic organs, and the sexual characters distinguish it at first sight.

Zonitis rufa, pallide rufa, breviter pubescens, capite modice, thorace parcius punctato, hoc latitudine fere longiore, nitido subcanaliculato, lateribus antice rotundatis, elytris dense rugose punctatis, pedibus ore antennisque nigris. Long. .27.

One specimen, Frontera, (Rio Grande) Mr. Clark. This species has very much the appearance of a small *Nemognatha*, but the maxillæ are not elongated: the spurs of the posterior tibiæ are broad, the outer one obtuse, the inner one subacute. The second joint of the antennæ is two-thirds as large as the third.

Tanymecus lautus, niger, parcius cinereo-squamulosus, capite punctato canaliculato, thorace latitudine sesqui brevior, lateribus parallelis apice rotundatis, parcius grosse punctato, disco subcanaliculato, postice fovea lata excavato, elytris thorace latoribus humeris obtuse angulatis, apice valde declivi, punctis seriatis mausculis impressis, interstitiis alutaceis. Long. .46.

One specimen, Frontera, (Rio Grande) Mr. Clark. The largest species I have seen within our Territories.

Notice of a new species of Salmonidæ, from the north-eastern part of the United States.

By CHARLES GIRARD.

The body of the male is subfusiform and rather slender, particularly the caudal region; the head being regularly subconical and contained five times in the total length. The maxillaries are gently curved, extending backwards to about the posterior margin of the orbit. The female is stouter, with the peduncle of the tail shorter; the head has the same general shape, but is not contained five times in the total length. The maxillaries are less curved, but extend as far backwards as in the male. The eye is very large; its diameter being contained nearly five times in the length of side of head. The caudal is deeply emarginated posteriorly, giving to it a more forked appearance than in either *Salmo oquassa* or *Salmo sebago*. The adipose fin, in the male, is situated opposite the anterior margin of the anal, whilst in the female it corresponds to the posterior margin of the same fin.

The scales are well developed, being somewhat smaller, however, than in *Salmo sebago*, and considerably larger than in either *Salmo oquassa* or *Salmo erythrogaster*. On the dorsal and ventral regions they are considerably smaller than upon the sides and along the peduncle of the tail. They extend, diminishing in size, over nearly the half of the length of the middle rays of the caudal fin. The lateral line takes an almost straight course along the middle region of the flanks. The following is an approximate formula of the rays of the fins:

D 2. 12. A 1. 9. C 8. I. 8. 9. L. 5. V 1. 9. P 14.

There are two anterior rudimentary rays to the dorsal, one or two to the anal, one to the ventrals, eight or ten to the upper lobe of the caudal, and five or six to the inferior lobe.

The upper surface of head and dorsal region are blackish brown; the sides are silvery white, and the belly yellowish. The region above the lateral line is densely spread all over with black irregular spots, some of which are confluent; a few scattered ones may be seen beneath that line upon the middle of the abdomen. Four to six of these spots, well defined, are always observed on the oper-

culum, one of which may occasionally reach the preoperculum. A few reddish orange dots, individually situated in the middle of a black spot, are occasionally observed along the middle and upper part of the flanks. Whether these dots are peculiar to the female or proper to both sexes, I am not prepared to say, from want of sufficient information, upon that point.

This species was first brought to my notice by M. Townsend Glover, of Fish-kill Landing, Dutchess Co., New York, who caught it in the upper affluent of Union river, in the State of Maine, during the middle of September. I propose for it the name of *Salmo gloverii*, as a token of gratitude towards an artist whose labors, if promoted, would contribute so much to popularize natural history, and spread its benefits throughout the country.

*A list of the North American Bufonids, with Diagnoses of New Species.**

BY CHARLES GIRARD.

1. *BUFO AMERICANUS*, Le Conte MS. HOLBR. N. Amer. Herp. v. 1842, 17, pl. iv.

Inhabits the Atlantic States, from Maine to Virginia, extending through the mountainous regions of the Carolinas into the valley of the Mississippi. It is likewise found in the North Western States and Canada.

2. *BUFO LENTIGINOSUS*, Holbr. N. Amer. Herp. v. 1842, 7, pl. i.—*Rana lentiginosa*, SHAW, Gen. Zool. iii. 1, 1803. 173. Pl. liii.—*Bufo erythronotus*, HOLBR. Ibid. 11. Pl. ii.

Ranges along the sea coast, from South Carolina to Florida, and following the gulf through Alabama and Mississippi. Scattered individuals are met with across the mountains to South Carolina.

Bufo erythronotus does not appear to us different from *B. lentiginosus*, since color alone cannot be taken as an exclusive guide amongst the bufonids.

3. *BUFO WOODHOUSII*, Girard.—*Bufo dorsalis*, HALLOW. (non Spix). Proc. Acad. Nat. Sc. Philada. vi. 1852, 181; and in *Sitgreaves Exped.* Züni and Color. Rivers, 1853, 142. Pl. xix. Head short and thick; upper central surface but little depressed, not to say grooved; the suborbital ridge being slightly elevated. The occipito-temporal ridge is thicker, and hence a little more conspicuous. Snout rounded, nostrils terminal. Mouth wide, upper jaw emarginated. Tympanum and parotids of moderate size. Limbs rather short and stout. First finger much longer than the second. A large metacarpal disk. Toes semipalmated. Two metatarsal tubercles, a very large and a very small one. No membranous fold at the inner lower edge of the tarsus. Papillæ of medium size upon the back. Inferior surface, with rather small and crowded granular warts. Above dark brown, with numerous lines of yellow. A dorsal yellowish vitta running the whole length of the body. Transverse blotches of black upon the thighs and fore arms. Beneath ochraceous.

The affinities of this species are intermediate between *B. americanus* and *B. lentiginosus*. Its geographic range appears to be New Mexico, having so far been found in the province of Sonora, and in the San Francisco mountains.

4. *BUFO COGNATUS*, Say, in *Long's Exped. to Rocky Mts.* ii, 1823, 190.—HOLBR. N. Amer. Herp. v. 1842, 21. Pl. v.—B. and G. in *Marcy's Expl. Red Riv. La.* 1853. 242. Zool. Pl. xi.

A very characteristic species in the structure of the upper surface of head. Found in the territory of Nebraska, and southwards as far as the province of Coahuila, Mex.

5. *BUFO SPECIOSUS*, Girard.—Head moderate; its upper surface smooth and even, or with slight traces of ridges or carinæ. Snout subtruncated and rounded; nostrils subterminal. Mouth large, upper jaw slightly emarginated. Tongue

* Specimens upon which these descriptions are based, are preserved in the museum of the Smithsonian Institution, at Washington.

small, elongate, posteriorly free for the fourth of its length. A subgular vocal bladder. Tympanum of medium size. Parotids subovoid, of stoutish appearance. Limbs of moderate development. First finger much longer than the second, which is equal to the fourth. A large subcircular metacarpal disk. Toes semipalmated. Two metatarsal spade-shaped processes, the innermost being much the largest. A membranous fold at the inner lower margin of tarsus. Skin above covered with papillæ of moderate development, and with small warts beneath. Color above greenish brown, maculated: no dorsal lighter vitta. Beneath, greenish or yellowish white, unicolor.

Allied to *B. woodhousii*, differing, however, in the form and development of the metatarsal processes. It appears to inhabit the valley of the Rio Bravo (Rio Grand del Norte), and to be not uncommon in the province of New Leon.

6. *BUFO PUNCTATUS*, B. and G. Acad. Nat. Sc. Philad. vi. 1852, 173.

A very marked species in the shape and structure of the head. Hitherto found in the valley of the Devil's river (Rio San Pedro, of Rio Grande), and in the province of Coahuila, Mex.

7. *BUFO DEBILIS*, Girard.—Upper surface of head without any crest or ridge. Snout rounded. Mouth moderate. Upper jaw emarginated. Tongue small. Tympanum small. Parotids moderate and elongated. Limbs of moderate development, femur shorter than tibia. First finger longer than the second. A large metacarpal disk. Toes slightly united at base by a web. Two metatarsal processes. No membranous fold at the inner lower margin of the tarsus. Skin above pustulous; pustules of moderate development; warts beneath very small. Color above brownish yellow, spotted. No dorsal lighter vitta. Beneath of a uniform soiled yellow.

Allied to *B. speciosus*; found in the lower part of the valley of the Rio Bravo (Rio Grande del Norte), and in the province of Tamaulipas.

8. *BUFO NEBULIFER*, Girard.—*Bufo granulosus*, B. and G. (non Spix). Proc. Acad. Nat. Sc. Philad. vi. 1852, 173.

This species is strongly suggestive of *B. marinus*, Schn. (*B. aqua Daud*); it is, however, easily distinguished from it upon a comparison of individuals of both species. It inhabits Texas, the valley of the Rio Bravo (Rio Grande del Norte), the provinces of Tamaulipas and New Leon, Mexico.

9. *BUFO COLUMBIENSIS*, B. and G. Proc. Acad. Nat. Sc. Philad. vi. 1853, 378.

This is possibly the largest species of North American toads; it is common in the valley of the Columbia River, Oregon Territory, where it was first observed by the naturalists of the U. S. Exploring Expedition under Capt. C. Wilkes.

10. *BUFO BOREAS*, B. and G. Proc. Acad. Nat. Philad. vi. 1852, 311.

So far the most northern bufonid; it is not uncommon about Puget Sound, where it was collected many years ago by the naturalists of the U. S. Exploring Expedition.

11. *BUFO HALOPHILA*, B. and G. Proc. Acad. Nat. Sc. Philada. vi. 1853, 311.

Since this species was first described an adult individual has been secured, which has enabled me to give the following diagnosis:

Upper surface of head without either crests or grooves. Skin thick and adhering to skull. Snout rounded. Parotids of medium size. Eyes moderate. Tympanum small. Tongue lanceolated, broadest posteriorly. Upper jaw emarginated. Inner finger longer than the second. Two metacarpal disks. A membranous fold along the tarsus. Toes semipalmated; two metatarsal tubercles. A narrow yellowish dorsal vitta. Ground color greenish yellow, with numerous black spots and dots, distributed all over the upper parts and sides of body, head and limbs. Beneath unicolor of a dingy yellow.

Inhabits the western coast, frequenting the sea margin; hitherto observed only in California.

12. *BUFO QUERCINUS*, Holbr. N. Amer. Herp. v. 1842, 13. Pl. iii.

This quite small species appears to be restricted to very narrow geographical limits, having so far been found only in the neighborhood of Charleston, S. C.

13. *BUFO INSIDIOR*, Girard.—Upper surface of head plane and smooth. Snout subacute, protruding. Mouth moderate, upper jaw slightly emarginated. Tongue elongated, tapering towards both ends. Tympanum inconspicuous. Parotids large and elongated, situated obliquely upon the shoulder. Limbs moderate. First finger equal to the second in length. A metacarpal disk, and a tubercle. Toes slightly webbed at base. Two metatarsal tubercles. Skin papillous above, warty beneath. Above of a bluish slate hue, with black markings. Beneath unicolor, dingy yellow.

Small specimens, perhaps immature, were collected in Chihuahua by Dr. Thos. H. Webb, attached to Comm. Bartlett's party in the survey of the U. S. and Mex. boundary line.

14. *ENGYSTOMA CAROLINENSE*, Holbr. N. Amer. Herp. First ed. i. 1836, 83. Pl. xi., and 2d ed. v. 1842, 23. Pl. vi.—DUM. and B. Erp. gen. viii., 1841, 743.

Found in South Carolina, Georgia, Florida, Louisiana and Mississippi.

15. *ENGYSTOMA RUGOSUM*, Dum. and B. Erp. gen. viii., 1841, 744.

Said to occur in the same regions as the preceding species. Have never observed it, and therefore cannot endorse it as a North American species.

The following amendments to the By-Laws were adopted :

Chapter viii., Art. 1. No specimen of Natural History contained in the collections of the Academy shall be loaned from the Hall, under any pretence, or for any purpose whatever.

Chapter xii., Art. 2. Every proposition to alter or amend these By-laws shall be submitted, in writing, at a meeting for business, and if adopted by the affirmative votes of two thirds of the members present, it shall be read at the meeting for business next succeeding ; and then, if adopted by the affirmative votes of two-thirds of the members present, it shall be again read at the next succeeding meeting for business, and on receiving the affirmative votes of two-thirds of the members present, it shall become a part of these By-Laws ; *Provided*, that at least twelve members be present at each of the three readings.

The following Article was added to Chap. XII :

Chapter xii., Art. 3. No one, or more, of the By-Laws of this Academy shall be suspended.

ELECTION.

Dr. William S. M'Ilhenny and Job R. Tyson, Esq., of Philadelphia, were elected *Members*.

June 6th.

Vice-President LEA in the Chair.

Letters were read—

From the Royal Saxon Society of Sciences, dated Leipzig, 27th Feb., 1854 ;

From the Royal Academy of Sciences of Vienna, dated Jan. 18 and Jan. 28th, 1854 :